



Before & After Surgery Education
for
**Lumbar Fusion
Surgery**

 Rutland Regional
Medical Center





A PROGRAM OF
RUTLAND REGIONAL MEDICAL CENTER

Welcome

Dear Patient,

Thank you for choosing Rutland Regional Medical Center and the Spine Care Program at Vermont Orthopaedic Clinic for your Lumbar Fusion Spine Surgery.

This book will guide you and:

1. Help prepare you for your surgery and hospital experience
2. Assist you in your recovery from Lumbar Fusion Spine Surgery
3. Prepare you for your recovery at home

This book is a general guide to recovery. We understand that all patients do not have the same needs. As you prepare for surgery, it is important for you to feel as comfortable as possible with your care.

It is your decision to have this surgery and it is very important that you go into it feeling good about the surgery and your recovery. You can help achieve the best recovery from your surgery by being an active and integral part of the care team before, during and after surgery. We hope and expect that you will continue to practice what the team has taught you long after you have left the hospital.

It is important that you and your home care helper(s) read this book carefully and refer to it during your recovery.

Please bring this book with you to the hospital.

Sincerely,

The Surgical Team

To learn more about the Spine Care Program at Vermont Orthopaedic Clinic, please visit our website at: <https://www.rrmc.org/services/vermont-orthopaedic-clinic/>

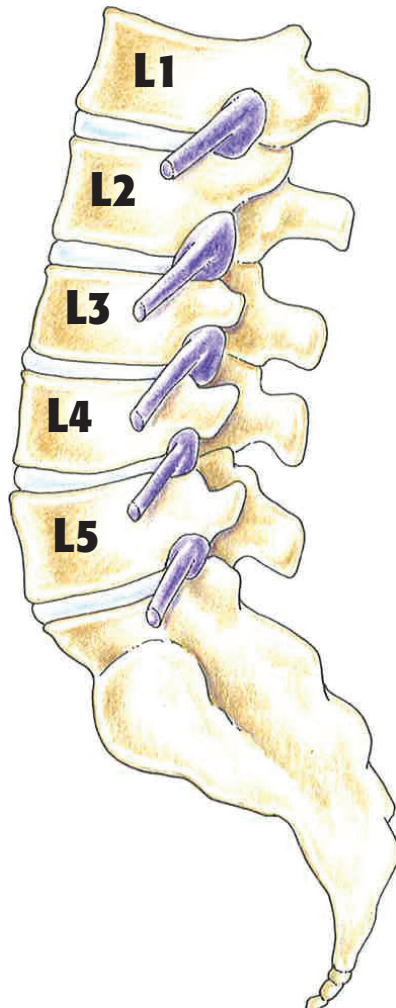


Important Phone Numbers

Advance Directive Assistance	802.773.9888
Financial Counselor	802.747.1648
Infection Prevention Nurse	802.772.2408
Occupational Therapy Department	
Monday – Friday, 8am-4:30pm	802.747.1840
Orthopaedic Clinical Liaison	
Monday – Friday, 7am-3:30pm	
Cell phone.....	802.342.7559
Pharmacist	802.855.3584
Physical Therapy Department	
Monday – Friday, 8am-4:30pm	802.747.1840
Pre-Op Assessment Nurse at Rutland Regional Medical Center	
Monday – Friday, 8am-4:30pm	802.747.1741
Prescription Refill – Vermont Orthopaedic Clinic	802.775.2937
Social Work Department	802.747.3713
Surgical Care Unit	802.747.3728
Vermont Orthopaedic Clinic – Spine Nurse Navigator	
Monday – Friday, 8:30am-5pm	802.776.2254

Normal Lumbar Spine Anatomy

The lumbar spine refers to the lower back. The vertebrae are labelled as L1 to L5. Between each vertebra, there is an intervertebral disc which acts as a shock absorber for the spinal column. Since this section of the spine bears most of the body's weight and allows for some motion, it is the area associated with most back problems.

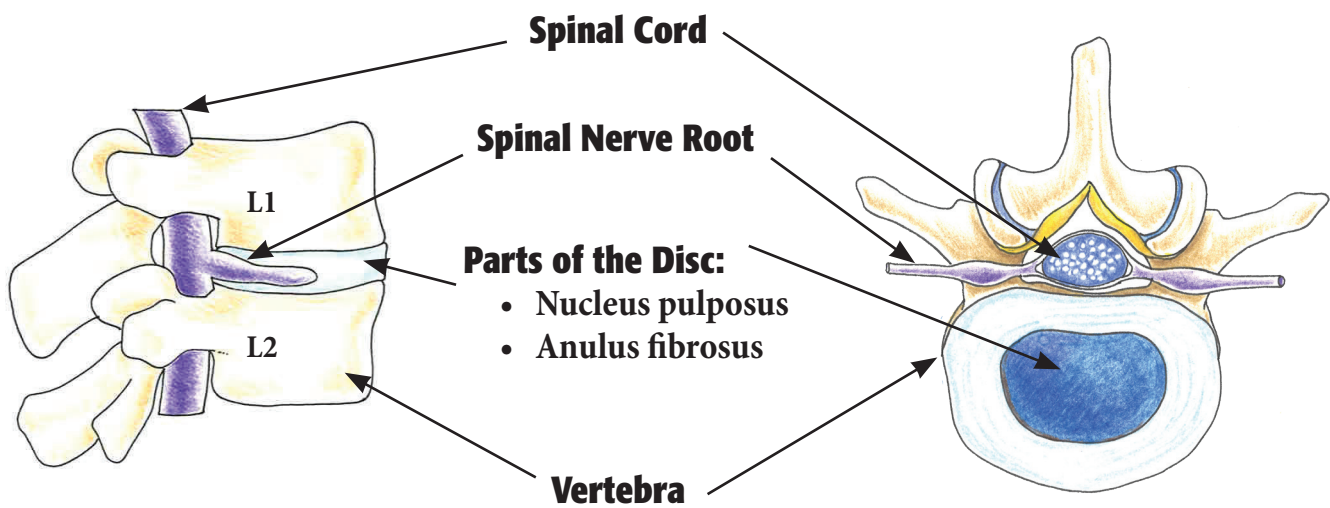


Lumbar Spine, L1-L5

Intervertebral Disc

Side View

Back - Top View



Lumbar Spine Problems

Sciatica and Herniated Disc

- Typically caused when the shock absorber between the bones pushes out on a nerve
- Symptoms may include pain, weakness, and/or numbness

Spinal Stenosis

- Most often a degenerative condition similar to arthritis in the knee and hip
- The degenerative changes leads to narrowing of the spinal canal, which makes it tight and irritates the nerves. This irritation of the nerves may cause heaviness in the legs, crampy pain and/or numbness.

Degenerative Disc Disease

- Wear and tear of the intervertebral disc (shock absorbers) between the bones that may lead to back pain

Spondylolisthesis

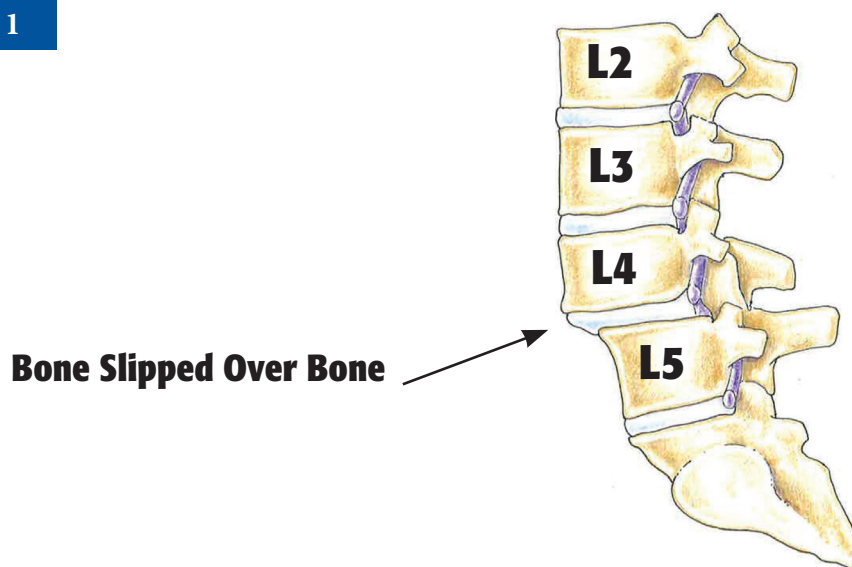
- When one bone slips over adjacent bone that may result in back and/or leg pain, weakness, numbness (Fig 1)
- Most common causes:
 - Degenerative – due to the degenerative process that allows one vertebra to slip over another; typically at L4-L5
 - Fracture of the bone connecting the front of the vertebra to the back; most commonly at L5-S1

Scoliosis

Other

- Trauma, infection, tumors

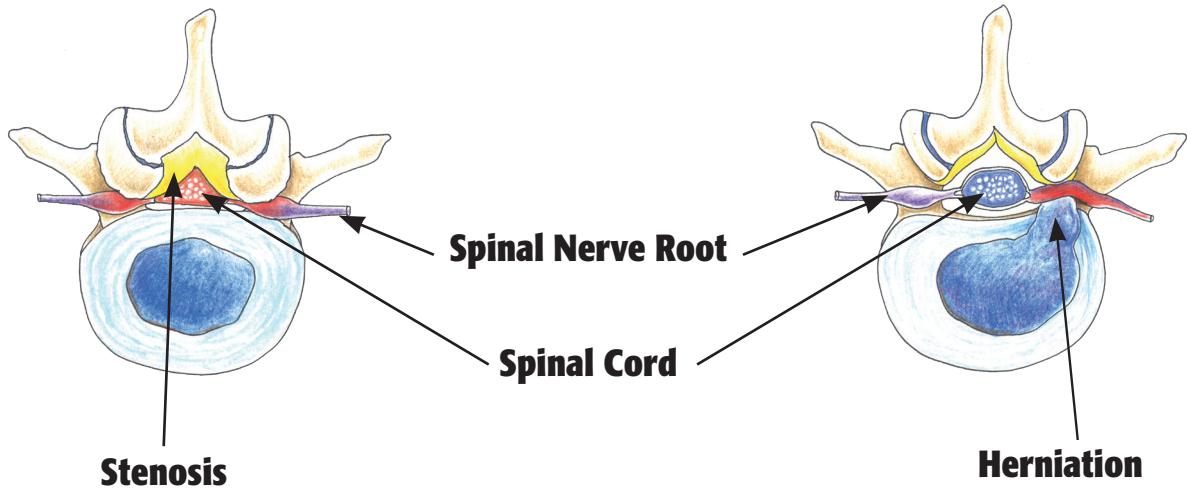
Fig. 1



Stenosis

Herniated Disc

Back - Top View



Front - Top View

Lumbar Fusion Surgery

Lumbar fusion surgery may be considered after non-surgical treatment has not been effective in providing appropriate relief of symptoms. Only in very rare circumstances will lumbar fusion surgery be considered prior to non-operative treatment options.

What is a spinal fusion?

A spinal fusion is essentially a “welding” process in which two or more vertebrae are “welded” together to prevent motion. Instrumentation is often used to help stabilize the bones and hold them in position. Typical instrumentation includes screws, rods, and cages.

What is a minimally invasive spinal fusion?

Minimally invasive spinal fusions have the same goal of traditional spinal surgery to stabilize the bones and decompress the nerves.

Utilizing advanced instrumentation, technology, and intra-operative Xrays, minimizes the damage to the surrounding muscles and allows for a faster recovery and quicker return to activities of daily living.

Advantage of minimally invasive spinal fusions:

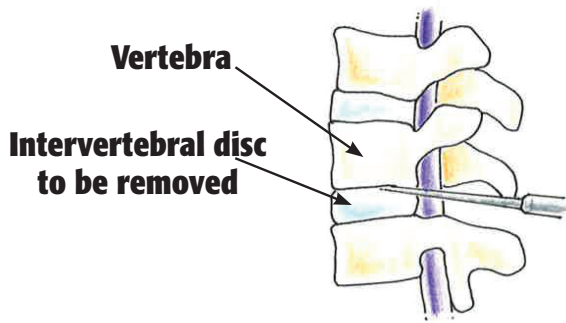
- Less pain after surgery
- Faster recovery
- Better function after surgery
- Less scarring

What is an interbody lumbar fusion?

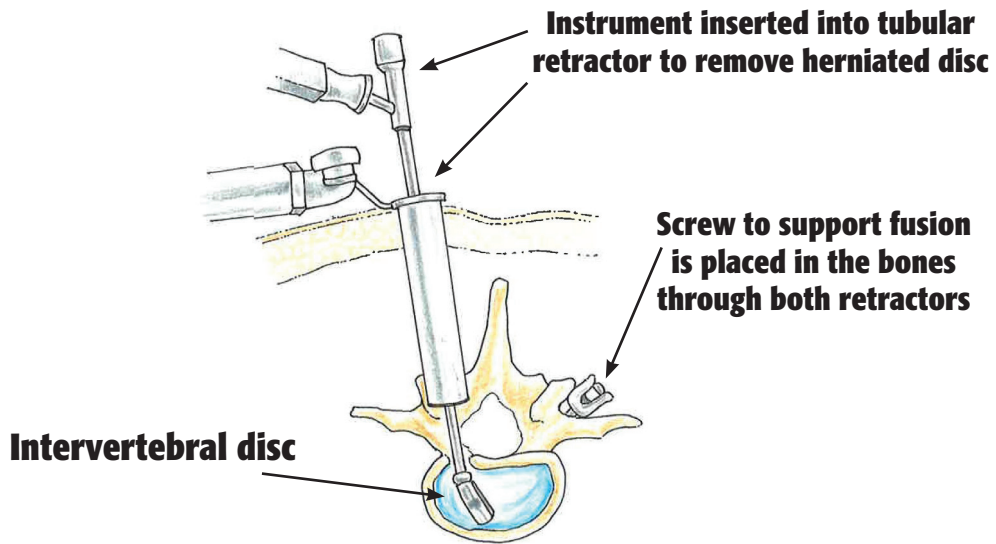
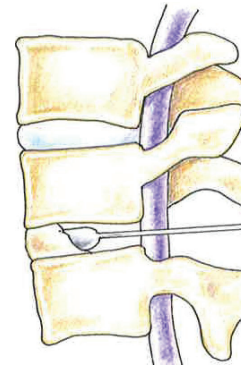
A method of fusion that involves removing the disc material between the lumbar vertebrae. After the disc space is “cleaned out,” it is then packed with bone material and often a supportive cage to maintain stability and allow the bone to grow between the vertebrae.

Why are screws and rods needed for a fusion?

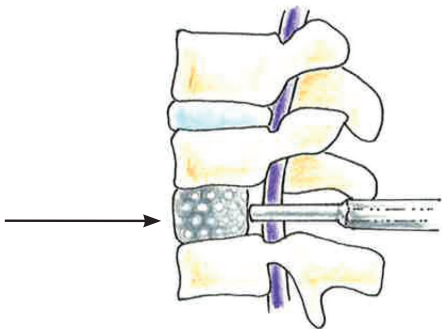
The screws are carefully inserted through the bone that connects the back of the vertebra to the front called the pedicle. It is a tubular section of the vertebra. The screws at each level are then connected by a rod. The rod and screws allow for better stability during the healing process. This is typically done on the right and left sides of the vertebra.



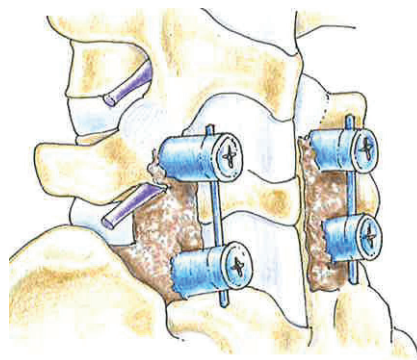
Bone packed into disc space



Intervertebral cage



Screws and rods



Possible Risks and Complications with Lumbar Fusion

As with any major surgery, there are potential risks and complications.

It is very important that you are informed of these before the surgery. Very rarely, complications may prove to be life threatening.

We will take every precaution to prevent complications at the time of surgery, but the risk is not zero.

- Blood Clots
- Heart Attack
- Stroke
- Infection
- Pneumonia
- Continued Discomfort
- Malunion/Nonunion of Fusion
- Back Stiffness
- Nerve Damage
- Fractures
- Mechanical Failure

Preparing for Surgery

Lumbar Fusion Surgery is typically not an emergency surgery. Preparing for a Lumbar Fusion Surgery begins several weeks before the actual surgery.

Before your surgery, many people will be asking about your insurance, medical history and discharge arrangements. You may feel that you are answering the same questions many times, but this redundancy is necessary. If you have everything written down, it will make the process smoother. If you have not done so already, please complete the Patient Personal History Form mailed to you and mail it to us or bring it to your class.

Mail to:

Ambulatory Care Unit
Rutland Regional Medical Center
160 Allen Street
Rutland, VT 05701

This form includes much of the necessary information that will assist the healthcare team in caring for you.

Insurance Coverage

Please contact your insurance company to see if your health plan has special requirements, such as prior approval or a co-pay. It is your responsibility to make sure that your plan's requirements are met.

If you need assistance, please contact Rutland Regional Medical Center Patient Accounts Representative at 802.747.1751 or 866.460.8277.

Your Healthcare Team will include:

Orthopaedic Spine Surgeon

who will perform the surgery and manage your overall treatment.

Physician's Assistant/Nurse Practitioner

who will assist your surgeon and help care for you before, during and after your surgery.

Anesthesiologist or Certified Registered Nurse Anesthetist (CRNA)

who will keep you safe and comfortable during and immediately after your surgery.

Pre-Op Assessment Nurse at Rutland Regional

who will get you prepared for anesthesia.

Nurse Case Manager

who will coordinate your care before surgery, during your hospital stay and after discharge from the hospital.

Pharmacy Technician

who will help you understand your medications.

Physical Therapist

who will design a rehabilitation program to build strength and aid recovery.

Occupational Therapist

who will teach you how to make daily activities safer and easier after surgery.

Nurses

who are specially trained for the care of cervical spine surgery patients before, during and after your surgery.

Spine Nurse Navigator

who will get you scheduled for your surgery and assist you with appointments as needed.

Get in Shape for Surgery

Nutrition

Good nutrition is important, especially for patients planning surgery. Be sure to eat a balanced diet to help you to recover well and heal properly from your surgery.

Just prior to surgery is **not** the best time to start a diet for the purpose of weight loss.

To optimize your body's ability to heal, be sure to eat food from all food groups.

If you suffer from obesity, pre-operative weight loss will decrease your risk of complications. If you would like information to help you with weight loss, discuss this with your surgeon and/or primary care provider.

Alcohol & Drugs

If you drink alcohol, try your best to not have any for at least 48 hours prior to surgery. If you have an alcohol dependency problem, please inform your surgeon and/or primary care provider prior to your surgery.

If you use drugs or any other types of controlled substances, tell your surgeon and/or primary care provider. These substances can have an impact on your surgery and recovery.

Smoking

Smoking decreases blood flow patterns, delays healing and slows your recovery. For ongoing support and help to quit tobacco use, the following programs are suggested:

- Rutland Regional Medical Center's Tobacco Treatment Program 802.747.3768
- Vermont Quit Line 877.937.7848
- New York State Quit Line 888.609.6292
- Anywhere in the USA 800.784.8669

**IF YOU SMOKE,
STOP!**

For more info, or to share stories, tips and advice, please check the following websites:

- www.cdc.gov/tobacco
- www.802quits.org



Medical Preparation

History and Physical Exam

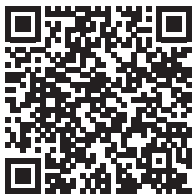
You must have an appointment to see your primary care provider before this surgery. This will often be set up by the Spine Nurse Navigator at VOC when scheduling this surgery. He/she must conduct a general medical evaluation within 30 days of your surgery. This examination will assess your health and your risk for anesthesia. Inform your provider of any medical conditions you have, all the medications you are taking and any surgical implants you have.

Testing

You may have a blood test, urine sample, EKG and Chest x-ray, depending on your medical problems. Your medical provider or specialist will determine if any other testing should be done. If you are sent to a specialist, please keep us informed so that we have all information available to us prior to your day of surgery.

Patient Education at Rutland Regional

At Rutland Regional we understand that having surgery is never easy. That's why our surgeons and staff work hard to make your surgical experience as comfortable and convenient as possible. To help prepare you for your surgery, please visit our website for information and videos pertaining to your surgery:



www.RRMC.org

Patients & Visitors

Click on: Patient Education

Click on: What to Expect for Your Surgery

Scan the QR code or follow the steps above.

Important Information Regarding Your Medications

Herbal Medications – For your safety, please note that a large percentage of people taking herbal medications/supplements may be at risk for potential interactions between prescription medicines, over-the-counter medicines, or with anesthesia medications.

- Give a detailed and accurate list of all medications you are taking to your surgeon/primary care physician and pre-op nurse.
- Some of the more common herbal medicines used that cause potential interactions are listed below under Dietary Supplements. This is just a small list of herbs available.
- If you have any questions regarding any medicines/supplements you are taking, please call the pre-op nurse at 802.747.1741, if possible, two weeks prior to your surgery to prevent postponement.

Two (2) Weeks Before Surgery – Stop Taking:

- Herbal products
- Vitamins
- Dietary supplements

This includes but is not limited to:

- CBD
- CoQ10
- Diet pills
- Dong Quai
- Echinacea
- Ephedra
- Fish Oils (*Omega-3 Fatty Acids*)
- Garlic pills
- Ginger
- Gingko Biloba
- Ginseng
- Kava
- Licorice
- Melatonin
- St John's Wort
- Valerian
- Vitamin E (*also found in multivitamins*)
- Vitamin K

Additionally, please discuss with your prescribing provider before stopping monoamine oxidase inhibitors (MAOI), a specific type of antidepressant:

- Azilect®
- Nardil®
- Parnate®
- Selegiline

13 Days Before Surgery – Stop Taking:

- Mounjaro (*tirzepatide*)
- Ozempic (*semaglutide*)
- Wegovy (*semaglutide*)
- Bydureon (*exenatide extended-release*)
- Trulicity (*dulaglutide*)

One (1) Week Before Surgery – Stop Taking:

- Celebrex®
- Diclofenac
- Doan's Pills
- Dristan products
- Effervescent tablets
- Fiorinal
- Ibuprofen (*Advil®, Motrin®*)
- Meloxicam
- Naproxen (*Aleve®*)
- NSAIDs including but not limited to Aspirin (*if used for pain*)
- Pepto Bismol®
- Percodan
- Please note: Acetaminophen (*Tylenol®*) is safe to take.

72 Hours Before Surgery – Stop Taking:

- Jardiance (*empagliflozin*)
- Farxiga (*dapagliflozin*)
- Invokana (*canagliflozin*)

48 Hours Before Surgery – Stop Taking:

- Metformin (*Glucophage*®)
- Sildenafil (*Viagra*®)
- Tadalafil (*Cialis*®)
- Trimix injection
- Vardenafil (*Staxyn*®, *Levitra*®)
- Varenicline (*Chantix*®)
- Byetta (*exenatide*)
- Adlyxin (*lixisenatide*)
- Soliqua (*lixisenatide/insulin glargine*)
- Saxenda (*liraglutide*)
- Victoza (*liraglutide*)
- Xultophy (*liraglutide/insulin degludec*)
- Rybelsus (*semaglutide*)

You Must Check with Your Medical Provider or Specialty Provider if You Take:

- Adalimumab (*Humira*®)
- Allopurinol
- Anagrelide (*Agrylin*®)
- Aspirin (*for heart disease/stroke*)
- Azathioprine
- Cyclosporine
- Colchicine
- Etanercept (*Enbrel*®)
- Hydroxychloroquine (*Plaquenil*®)
- Infliximab (*Remicade*®)
- Mesalamine (*Apriso*®, *Asacol*®, *Canasa*®, *Delzicol*®, *Lialda*®, *Pentasa*®)
- Methotrexate
- Naltrexone (*ReVia*, *Vivitrol*®)
- Pentosan (*Elmiron*®)
- Pentoxifylline (*Trental*®)
- Sirolimus (*Rapamune*®)
- Sulfasalazine
- Tacrolimus (*Prograf*®)

Blood Thinners:

Specific recommendations for when to stop and restart blood thinners will be provided by the Anticoagulation Clinic and/or your primary care provider/specialty provider, examples of these medications are:

- Apixaban (*Eliquis*®)
- Cilostazol (*Pletal*)
- Clopidogrel (*Plavix*)
- Dabigatran Etxilate (*Pradaxa*®)
- Dipyridamole (*Persantine*, *Aggrenox*)
- Edoxaban (*Savaysa*®)
- Prasugrel (*Effient*)
- Rivaroxaban (*Xarelto*®)
- Ticagrelor (*Brilinta*®)
- Ticlopidine (*Ticlid*)
- Vorapaxar (*Zontivity*)
- Warfarin (*Coumadin*®, *Jantoven*)

Medications to Take on the Morning of Surgery:

Minimizing Infections When Having Lumbar Fusion Surgery

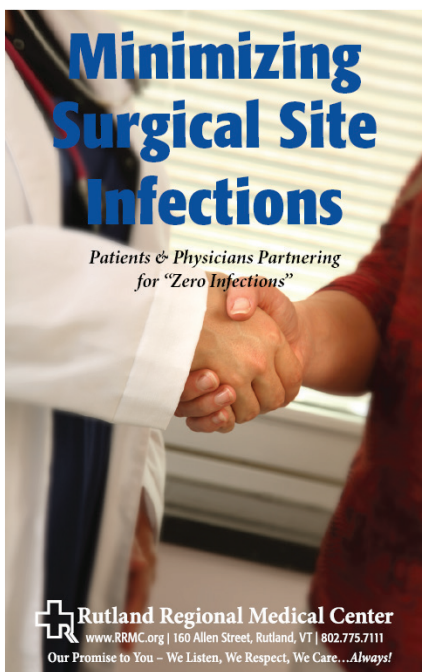
Skin Prep

It is very important to make every effort to prevent infections at the time of your surgery. Washing your skin prior to arrival at the hospital is the first step you can take to decrease this risk. More specific instructions and dates, and a skin preparation bag will be provided at your education class.

To Decrease the Risk of Infection

Stay healthy before surgery. Notify your surgeon and/or primary care provider if you come down with a fever, cold or any other illness in the week prior to surgery.

In addition, any blisters, cuts or boils should be reported. If infection is found, surgery is generally delayed until the infection is cleared.



Pre-Admission Nasal Screening

In preparation for your surgery, we will be collecting a swab from your nose. This will be collected at the time of your education class. The sample will check for Staph bacteria. Staph bacteria can be present in many healthy individuals without causing them to be sick; this is known as "colonization".

During your class you will be given a prescription for a nasal ointment. If your test is positive, you will receive a call within one week to inform you of the type of Staph bacteria that is present.

If your test is negative, you will NOT receive a phone call and can destroy the prescription.

There are two types of Staph bacteria:

- MRSA – Methacillin Resistant Staph Aureus (*Methacillin is a type of antibiotic*)
- MSSA – Methacillin Sensitive Staph Aureus

If positive, you will be instructed on which set of instructions to follow.

Please read and refer to the **Minimizing Surgical Site Infections** booklet, which you will receive in your pre-op education class.

Four Days Before Your Surgery

For specific dates, please reference your individual calendar provided to you.

Help reduce your risk for infection by following these directions:

- ▶ You will be given 5 medicated sponges for skin preparation before your surgery.
- ▶ You will take four night time showers and a fifth shower the morning of surgery.
- ▶ **DO NOT** shave legs, submerge your body in water, use hot tub, swim, or do barn chores once you have started your skin preparation showers.

Bed linens:

- ▶ Change the linens on your bed the same evening of your first shower only
- ▶ Do not let pets sleep next to you under the cover.

Shower instructions:

If you want to wash your face or hair, do this first with **usual** soap/shampoo and rinse well. **DO NOT** use medicated sponges on face, ears, hair or genitals.

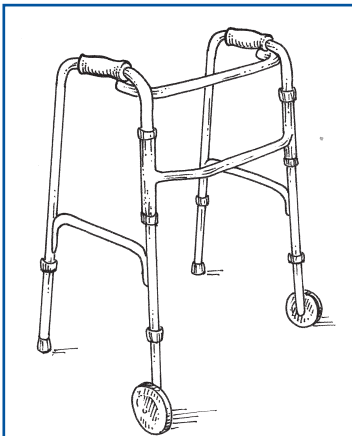
To Shower Body:

1. Open one medicated sponge package, remove fingernail stick and throw it away
2. Wet your body in the shower
3. Step away from water or turn water off – suds need to stay on your skin to kill bacteria
4. Using the SPONGE SIDE only
 - Wash from the chin down creating suds. This should take 2-3 minutes. Be sure to *wash well* your armpits, front of groin, and any skin folds you may have because bacteria live in warm, moist places.
 - Lather should REMAIN on your skin for 2-3 minutes for a total of 5 minutes to reduce skin bacteria.
5. Rinse well
6. Dry with a clean, fresh towel after each shower
7. Repeat for a total of 5 showers

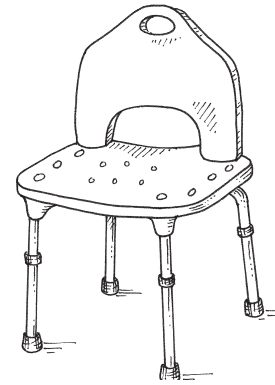
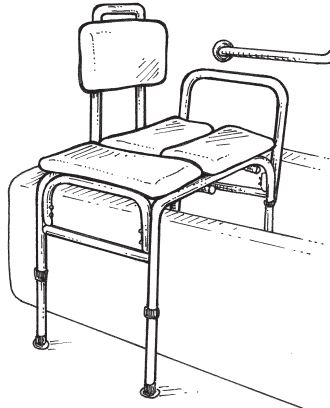
Equipment to Look for Before Surgery

Your insurance company will often not pay for this equipment **before** surgery but may after your surgery.

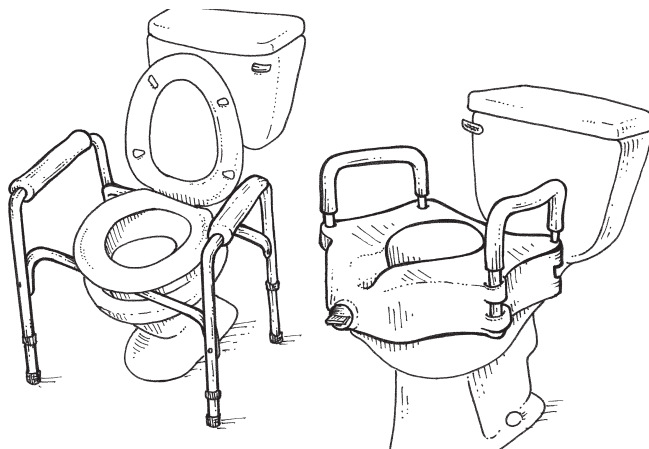
If you are not able to find the needed equipment, the Case Manager will visit you in the hospital and assist you in obtaining the additional items you may require.



Walker with wheels on the front



Tub Transfer Bench for over tub shower or Shower Chair for walk in shower



Commode for over the toilet or Elevated Toilet Seat with arms

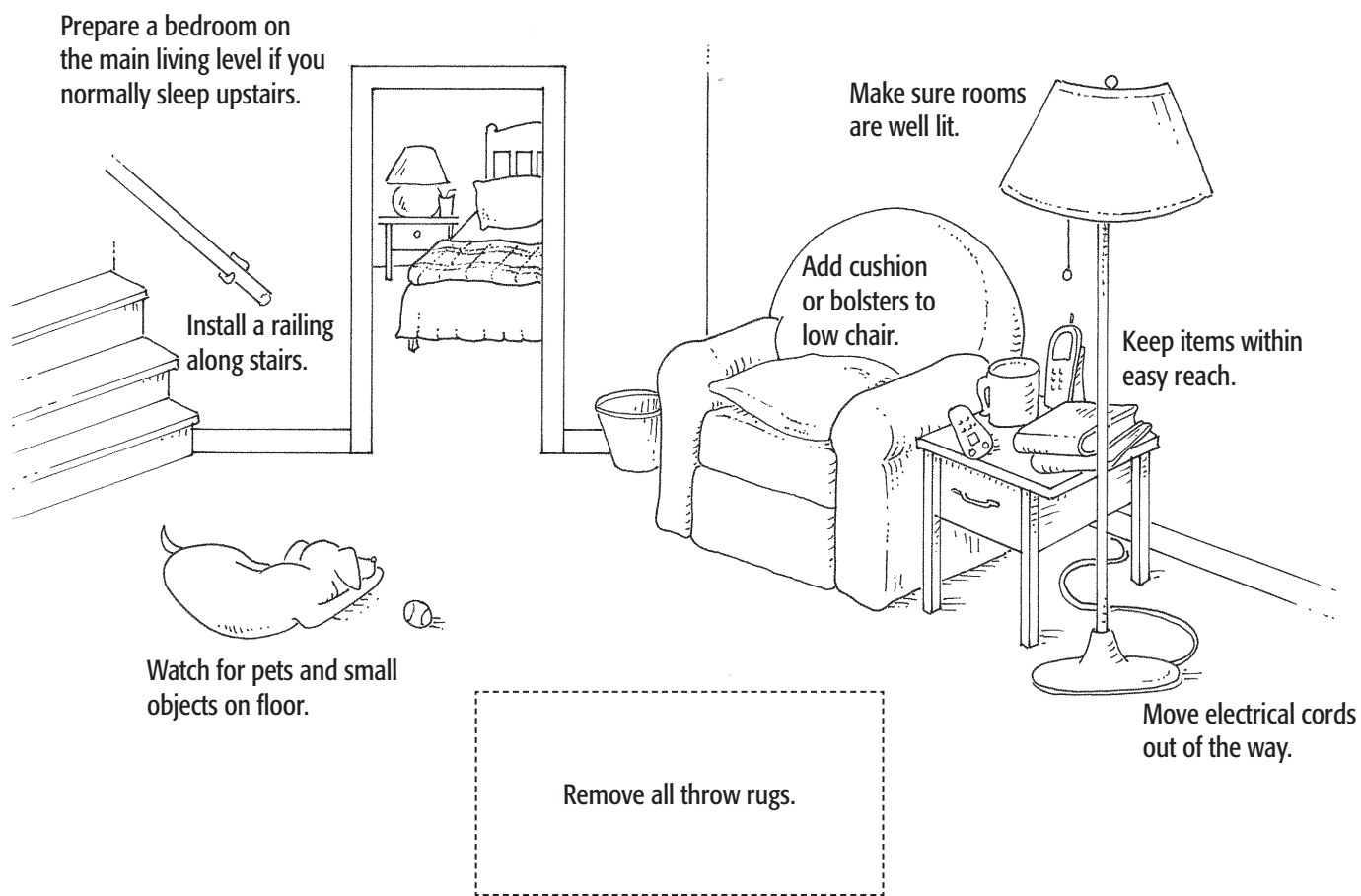
Home Preparation Before Surgery

The average hospital stay is 24 hours.

You are encouraged to arrange for someone to assist you in the first two weeks after discharge from the hospital as you will be recovering from the surgery.

- Scatter rugs should be removed or taped down to prevent you from tripping.
- You should have enough room to walk with a walker if needed. No Clutter!

- You should place frequently used items at waist level, for example, hair products, extra roll of toilet paper, refrigerator items, etc.
- Arrange for pets to be cared for during your recovery period as they may get underfoot. It will be difficult for you to feed and water them after your surgery.



Planning for Your Hospital Stay

Personal items and clothing should be limited to those which fit into a single, small piece of luggage. There is very little storage space in your hospital room.

If you expect family or someone else to visit you as soon as you go to your hospital room, it may be most convenient for them to bring in the things you want while in the hospital.

Regarding your hospital stay, please note the following:

- We prefer that you use a hospital gown the first day after surgery. It is less restricting and easier to get on and off. Clean hospital gowns are available at all times.
 - You will be walking shortly after surgery. Shoes with non-skid soles are preferred. Bring orthotics if you use them.
 - You will want to wear loose fitting clothes after surgery. Physical Therapy will be walking with you in the hallway while you are in the hospital.
 - The hospital provides basic toiletry articles. If you prefer a special type of soap or hair product, please bring them with you along with any of your basic cosmetics.
 - Electric razors, CPAP machines and battery-operated appliances are the only appliances you may bring to the hospital. This is for the safety of you and other patients.
- You may bring a computer, cell phone or tablet. The hospital does have wifi.
 - If you have a cane, walker or crutches, make arrangements for them to be brought to the hospital the day of discharge.

Additional Items to Bring to the Hospital

- **Health Care Proxy**, if you have one.
- **Short, Lightweight Bathrobe**, if you have one. Short clothing helps to prevent tripping while you walk.
- **Eyeglasses instead of Contact Lenses**. They are easier to take care of and less likely to be lost in the hospital.
- **Dentures**. We will provide a container for storing these. Bring your own denture adhesive. When you remove them, be sure to keep the container on your bedside table or in a drawer, and not on the bed or a food tray. As with glasses, we cannot be responsible for loss.
- **This Lumbar Fusion Book**.
- **Written List of Medications** you are taking or were instructed to bring to the hospital with you. Include any you may have stopped in anticipation of surgery.
- **Telephone Numbers** of people you may want to call.
- **Book, Magazine or Hobby Item** to assist with relaxation.

What Not to Bring to the Hospital

- **Valuables or Money**
Cash in excess of \$20.00 should be deposited in the hospital safe when you arrive or sent home with your family. We respect your property rights but cannot guarantee security for your personal property.
- **Jewelry**
- **Credit Cards**
- **Your Own Medications Unless Instructed to Do So by Your Primary Care Provider, Surgeon or Pre-op Nurse**
- **Pillow and/or Blanket**
The hospital will provide those for you.
- **Tobacco or Tobacco Products**
Smoking of any kind is prohibited on the hospital campus.
- **Do Not Wear Nail Polish on Your Hands or Feet**
Please remove prior to your stay at the hospital.
- **Do Not Wear Any Makeup**
You may bring it with you to use after your surgery.
- **We respect your property rights but cannot guarantee security for your personal property.**

The Day Before Surgery

1. Call the Ambulatory Care Unit between the hours of 2pm and 4pm at 802.747.1741 as follows:

- If your surgery is scheduled Tuesday through Friday, call the day before.
- If your surgery is scheduled on Monday, call on the Friday before.

At your education class, you will be given any additional instructions.

2. Do not eat 8 hours before arrival time on the day of your surgery. This includes candy or chewing gum. If directed, take medications with a sip of water on the morning of your surgery. You may have clear liquids only up to 2 hours before arrival time.

If you get thirsty, you may rinse your mouth with water and spit it out. Do not swallow. If you forget and eat or drink something, please tell the nurse or doctor. The time of your surgery may need to be changed or postponed for your safety.

The Day of Surgery

Arriving for Your Surgery

On the day of your surgery, please report directly to the Ambulatory Care Unit. Take the lobby elevator to the 2nd floor. Turn right off the elevator and go to the window to let the secretary know that you have arrived.

Arrival at the Ambulatory Care Unit (ACU)

Plan to arrive at the hospital at the time you were instructed. Arrival time is approximately two hours before your surgery to assure there is enough time to prepare you and answer any questions you may have. You will be shown where and how to change into a hospital gown. Your clothing and personal items will be labeled and sent to your room after surgery. Final details will be completed and paperwork will be double-checked.

The nurse will prepare you for surgery by:

- Checking your blood pressure and heart rate
- Asking you about your medications and what you may have eaten that day
- Starting an Intravenous (IV) line
- Apply elastic stockings
- Giving you some medications that the doctor has ordered for you including an antibiotic

Your orthopaedic surgeon will visit with you before surgery. He/she will answer any last minute questions you may have and verify the surgery with you.

**Entrance to the
Ambulatory Care Unit**



Anesthesia

Once the nurse has finished preparations, the anesthesiologist will meet with you. He/she will discuss your health history, the kind of procedure you are having and the type of anesthesia you will be receiving. You will have time to discuss any anxiety, fears or to ask questions you may have. The anesthesia team may include a nurse anesthetist who assists the anesthesiologist with your monitoring and care during surgery. When you have surgery, you must have anesthesia.

General Anesthesia

You are unconscious and have no sense of awareness or sensation of pain. This can be accomplished using a variety of medications either given intravenously or via inhaled vapors through a mask or breathing tube.

What to Expect:

Before surgery you will be evaluated by an anesthesiologist. An anesthetic plan will be formulated which is best for you.

While in the operating room, you will be constantly monitored by your anesthesiologist. The monitoring includes EKG (*electrocardiogram*), blood pressure, oxygen level and temperature.

After surgery the effects of the anesthetic medications will be reversed and you will be closely monitored in the post anesthesia care room (*recovery room*) by specially trained nurses.

If you have specific questions or concerns about anesthesia before the day of your surgery, please speak with any of the following people:

- Your Surgeon
- The Preoperative Assessment Nurse in Ambulatory Care

You may also arrange an appointment to see the anesthesiologist before the day of your surgery by speaking with the preoperative assessment nurse.

The Holding Area

The Holding Area is a small area just outside the Operating Room. Here you will meet with a second anesthesia provider and the nurse that will be with you in the Operating Room.

In the Holding Area you may be given sedation to help you relax before entering the Operating Room.



The Operating Room

A special operating room is used to protect you against infection. Your doctor and nurses will be dressed in sterile gowns, masks and gloves.

The length of the Lumbar Fusion Surgery depends on the plan of care developed by your spine surgeon.

This picture shows an operating room bed that is often used for your surgery.



The Post Anesthesia Care Unit (*Recovery Room*)

Once your surgery has been completed, you will require close monitoring. You will be taken to the Post Anesthesia Care Unit (PACU) where a specially trained nurse will help you in the recovery process. You will spend 1-3 hours in the PACU. In PACU, you will be provided with oxygen, intravenous lines, and continuous cardiac and respiratory monitoring while your anesthesia wears off.

As you wake up, you may experience blurry vision, a dry mouth and feel cold. These effects are common and will wear off in a short time. A nurse will stay with you while you wake up to encourage, assist and monitor your progress.

An oxygen mask may be placed over your nose and mouth. Taking deep breaths will help to clear your lungs and help get some of the anesthesia medicine out of your system.

You may have some pain. The nurses will frequently ask you about your pain level. If you feel any pain or discomfort, let them know and you will be given medication to help control the pain. You will remain in PACU until you are stabilized. The anesthesiologist will determine your readiness to be transferred to your in-patient hospital room.

While you are in PACU, visitation by friends or family is not allowed. Your family will be kept well informed and will be notified when you leave the PACU for your room.



Hospital Room After Surgery

After surgery you will be wheeled in your bed to The Surgical Care Unit (SCU).

You may be in a private room or a room with another patient, depending on bed availability on the day of your surgery. The room features:

- Controls on bed rail for you to put your head up or down.
- Side rails to help you roll
- Nurse call bell for assistance
- Nurses specially trained to care for patients having Lumbar Fusion surgery will care for you
- Your Case Manager will visit to assist you with planning for your discharge
- Television (no extra charge)
- Phone for local calls only (no extra charge)
- You may bring a cell phone to use at your bedside
- White Board to keep you informed of your plan of care and the name of the staff members that will be caring for you
- A bed alarm will be placed on you to prevent injury until you are fully awake and able to get out of bed
- The average stay in the hospital is one overnight

*** To prevent you from falling, please never attempt to get out of bed without help.**



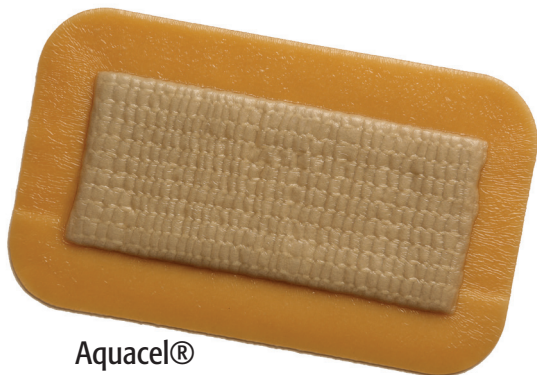
Postoperative Instructions

Bandage

You will have an Aquacel® bandage applied to the surgical area, before you leave the hospital, to maintain cleanliness and absorb any fluid. You may shower once this bandage has been placed.

These bandages have a silver component to decrease bacteria at site.

We will give you the date to remove the bandages.



Brace

If a brace is ordered by your surgeon, it will be delivered to your hospital room.



Other Treatments You May Experience After Surgery

Oxygen

When you wake up from surgery, you will be given extra oxygen. Often, you will have oxygen tubing in your nostrils the first night after surgery to keep the oxygen level in your blood high. This is typically removed the day after your surgery.

Intravenous Fluids

Intravenous fluids that were started before surgery will be continued until you are able to take adequate amounts of fluid by mouth. When you are able to take fluids by mouth, the nurse will place a cap on the IV to keep the vein open in the event it is needed at a later time during your stay.

Vital Signs

You will be receiving frequent blood pressure and temperature checks. The nurse will be checking your vital signs throughout the night time hours while you are in the hospital.

Ice Packs

Ice packs will be used during your hospital stay and at home to reduce pain and swelling of your surgical area. Pain and swelling will slow your progress with your

exercises. The ice pack is used continuously and you will be sent home with extra inserts to keep in your freezer.



Daily Blood Draws

Your orthopaedic surgeon may order additional bloodwork after your surgery.

Foley Catheter

A Foley Catheter is a sterile tube that is inserted into your bladder to ensure an open passageway for urine. This may be in place when you wake up from surgery. If you have a catheter, it will be removed within 24 hours after surgery. The goal is to discontinue this as soon as possible to lessen the chance of getting an infection.

Help Prevent Lung Problems

After surgery it is important to exercise your lungs by taking deep breaths. Normally, you may take deep breaths each hour, usually without being aware of it. They are spontaneous, automatic and occur in the form of sighs and yawns.

However, when you are experiencing pain or drowsiness from the anesthesia or your pain medication, your normal breathing pattern can change. To help with your return to normal breathing patterns, you may be provided with an incentive spirometer by the nursing staff. He/she will show you how to use your incentive spirometer.

Using the incentive spirometer will measure the deep breaths that are necessary to expand the small air sacs of your lungs to help clear your air passages of mucous.

For the first several days following your surgery, we recommend that you use your incentive spirometer 10 times every hour while awake. After discharge, we recommend using it every two hours (while awake) for two weeks.

Also, coughing is another method for helping to clear your lungs. To cough effectively, we suggest you follow these steps:

1. Breathe in deeply through your nose
2. Hold your breath to a count of 5
3. Breathe out slowly through your mouth
4. On your 5th deep breath, cough from your abdomen as you breathe out
5. Make a habit of doing this 2 to 3 times an hour, especially when it is inconvenient to use the incentive spirometer



Pain Management

While in the operating room your surgeon and team is already taking steps to help decrease the pain you will feel after surgery. Medical studies show that using a variety of different ways to reduce pain is better than relying on one. We will be asking you your pain level on a zero to ten scale with ten being the worst pain.

Our goal is to keep the pain you feel after surgery at a manageable level. After surgery we will do this by:

1. Checking on your pain level regularly throughout your stay in the hospital. Your nurse will be asking you about your pain level on a scale of 0 (no pain) to 10 (worst pain ever).
2. Ordering a scheduled dose of a non-opiate pain reliever, such as acetaminophen (Tylenol®), that can be given in your IV or by mouth.
3. Utilizing ways other than medications to help reduce pain (positioning, relaxation techniques, cold packs, physical therapy).
4. Using an opiate pain medication when you absolutely need it for pain relief: morphine, oxycodone, hydromorphone (Dilaudid®), hydrocodone (Vicodin®).

Keeping opiate medication use to a minimum is important to us because of the short-term and long-term risks.

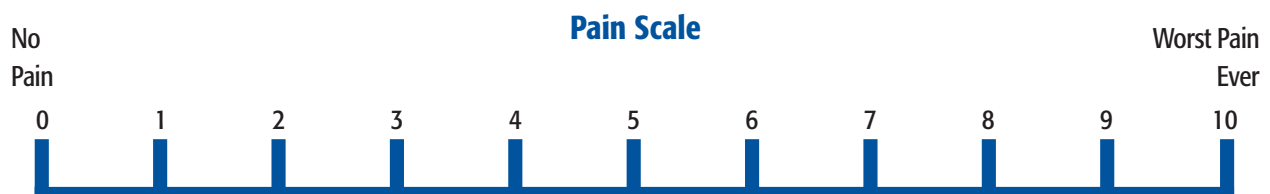
Potential risks:

- Accidental opiate overdose
- Increased sensitivity to pain
- Nausea, vomiting, constipation
- Physical dependence to opiates (can occur following 2 to 10 days of continuous use)
- Withdrawal after developing physical dependence (symptoms are: pain, nausea, diarrhea, restlessness, craving)
- Depression
- Opiate addiction

Discharge Instructions

If you do receive a prescription for an opiate medication for short-term use post-operatively, remember:

- Never take more opiate pain medication than prescribed
- Never share your prescription for an opiate
- Store opiates in a safe, secure place
- Make sure you safely dispose of all unused prescription opiates. RRMC Pharmacy has a MedSafe disposal box that can help you do this.



Minimize Your Risk for Blood Clots

Blood clots in leg veins, also called DVT's (*deep vein thrombosis*), can develop after surgery because you are moving less. When you walk, muscles in your legs help move the blood in your veins – without this added pump from your muscles, your blood is able to slow down and clot. Over time clots can grow and travel to places like your lungs; this is called a pulmonary embolism or PE.

Symptoms of a blood clot are swelling, redness, and tenderness in a specific area of your legs, chest pain and/or difficulty catching your breath. It is very important to report any of these symptoms to your provider or nurse. To decrease your chance of developing a blood clot:

- Your elastic stockings should be worn after surgery to help improve bloodflow. These will be placed before going into the operating room and should be worn until your follow-up after surgery to help improve blood flow.
- When you are in the hospital in bed or sitting, leg pumps will be attached to your legs to help push blood through your veins.
- Work with physical therapy as scheduled.

If you were on a medication to thin your blood before surgery, your surgeon will work with your prescribing provider to restart your medication post-op. It is important to take your medicine as directed.

A Pharmacy Technician will contact you 1-3 days before your surgery to review your medication list. Please tell the Pharmacy Technician all prescribed medications and any over the counter medications or supplements that you take.

While in the hospital your nurse and case manager will review the medications that have been prescribed for you and will make any necessary appointments for bloodwork, if required, while taking the medication.

Physical Therapy

Initially, the nurse will assist you in sitting up and dangling your legs over the side of your bed. Next you will stand with the use of a walker with continued assistance.

A physical therapist may see you on the day of your surgery.

Some patients benefit from taking pain medication 30 minutes prior to their therapy session. Discuss this with your nurse and/or your therapist.

Recovery and protecting your spinal fusion is a commitment on your part and must be done to assure the best outcome of your Lumbar Fusion Surgery.

Physical Activity Reminders:

- **Avoid** twisting or bending at the waist until your surgeon says it is safe. Your corset brace will help limit this.
- **Do not** lift anything that is heavier than 8 lb (3.6 kg) until your surgeon says that it is safe.
- **Avoid** lifting anything over your head.
- **Avoid** pushing or pulling motions.
- **Do not** start to exercise until your surgeon says it is safe and tells you what kind of exercise is safe to make your back stronger.

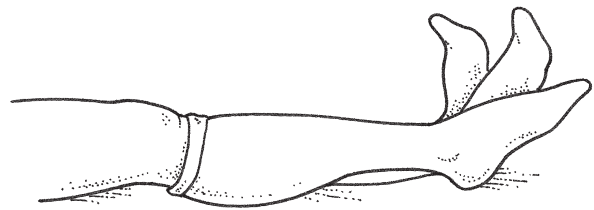
**Do your exercises to help maintain good circulation (pages 36-37).
Start walking with assistance as soon as you are cleared to do so.**

The following is a list of basic exercises you should include in your home rehabilitation program. The number of times you do each exercise depends on your capability.

Perform 10 repetitions, 3 times a day.

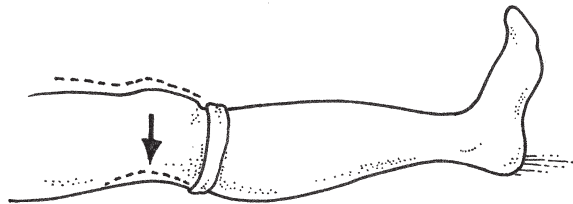
1. Ankle Pumps

Using your ankles, bend your feet toward you and then away (*point your feet*).



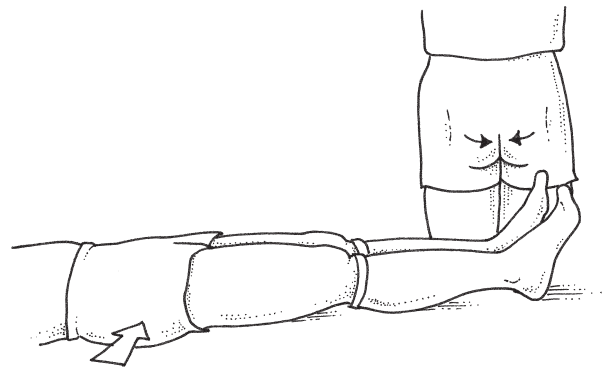
2. Quadriceps Sets

Lie in bed with your legs straight. Tighten the muscle at the front of your thigh as you press the back of your knee down toward the bed. Hold for a few seconds then relax.



3. Gluteal Sets

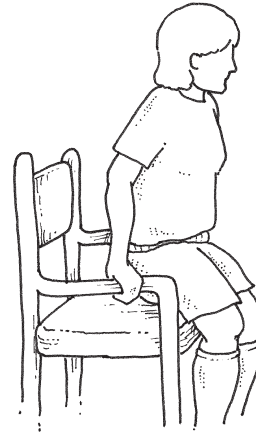
Lie in bed with your legs straight. Squeeze your buttocks together tightly. Your hips should rise slightly off the bed. Hold for a few seconds, then release.



4. Seated Press-Ups – Only Do Before Surgery

Sit in a sturdy chair with armrests. With palms flat on the armrests, press down to lift your buttocks from the chair. Hold for a few seconds. Bend your elbows to slowly ease back down.

Perform 10 repetitions, 3 times a day.



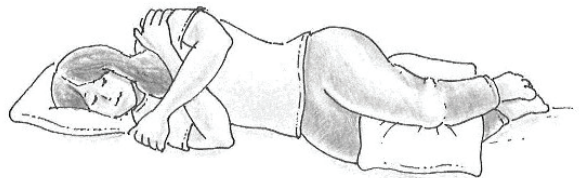
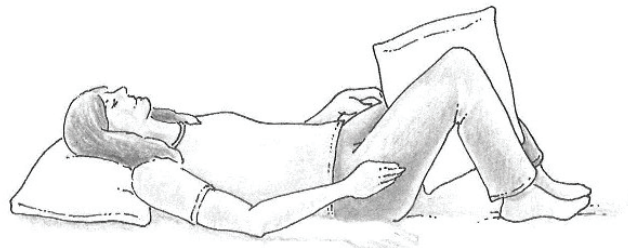
5. Walking

Concentrate on increasing the number of times each day you walk and the distance.

6. Log Roll

Place a pillow between your legs and by using your arms and legs to move your hips over to one side of the bed.

Then log roll to the opposite side of the bed onto your side. **Do not twist.** Drop your legs over the side of the bed and push yourself up to a sitting position.



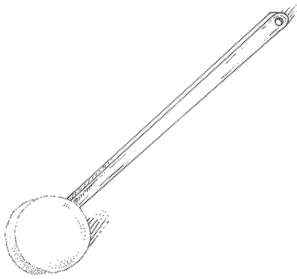
Occupational Therapy and Home Assistance Aids

The Occupational Therapist (OT) will focus on helping you regain independence in your personal and self care. You will have a visit from the OT while in the hospital and have the opportunity to practice using assistive equipment. Your OT will also help you practice how you should move

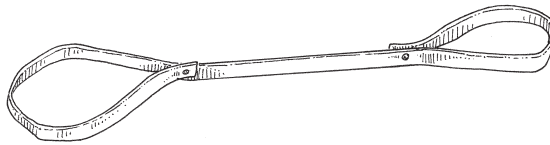
while doing everyday tasks to increase your independence and maximize safety.

Typical assistance aids may include any or all of the items pictured below.

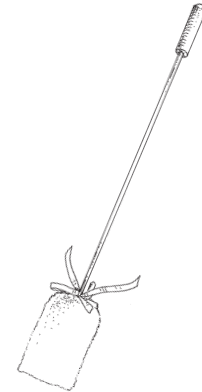
This equipment will be provided to you while you are in the hospital if you need it.



Long Handle Sponge



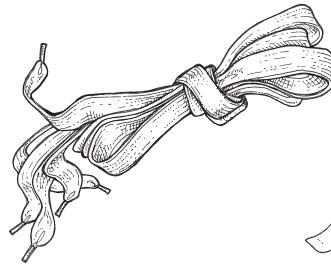
Leg Lifter



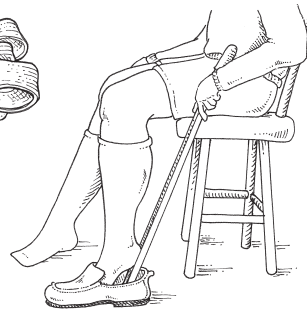
Toe Washer



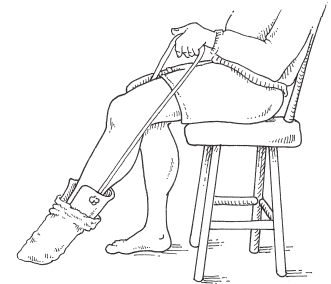
Dressing Stick



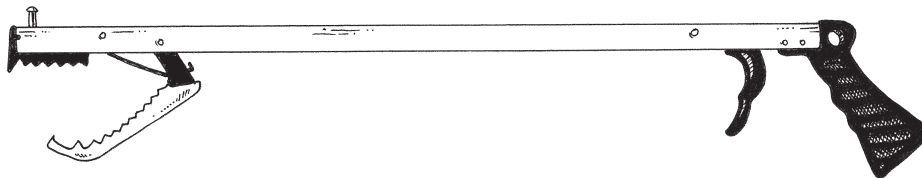
Elastic Shoelaces



Shoe Horn



Sock Donner



Reacher

Going Home from the Hospital

The Orthopaedic Clinical Liaison will be calling before you come to the hospital for surgery to assist in setting a safe discharge plan for you.

While in the hospital, a Case Manager will meet with you to review your discharge plans.

Most patients are ready for discharge from the hospital within 24 hours after surgery.

Your surgeon requires you to have support at home following discharge from the hospital.

Goals for Discharge

- Walk 150 feet with assistive devices
- Pain is managed with oral pain medication
- Ability to empty bladder without assistance
- Going up and down stairs safely
- Getting in and out of bed safely
- Medically stable



Discharge Instructions

Medication Prescription

Just before leaving, your doctor will write prescriptions for you to get filled at the pharmacy of your choice. You will receive prescriptions for: pain medication, a blood thinning medication, and a stool softener.

Narcotic prescriptions cannot be called to a pharmacy. The hard copy must be handed to the pharmacy. Another person may pick this up for you but must show their photo ID and know your date of birth. Narcotic prescriptions must be filled in the state of Vermont.

Surgical Care Site

Infections rarely happen after surgery, but you must remain alert to the possibility:

- Check the surgical site daily for signs of infection. Symptoms are:
 - Increased redness
 - Increase in swelling
 - Increase in pain
 - Any drainage
 - Oral temperature greater than 101°F

NOTE: If any of the symptoms above occur, please notify your orthopaedic surgeon at 802.775.2937.

- You may take a shower with the waterproof bandage in place. You will be given instructions in showering and when to remove this bandage.

Pain Management

- Apply ice packs. Cold therapy will continue to reduce post-operative swelling and provide you with greater comfort, especially after activity. Avoid applying heat until after your first postoperative visit.
- Take your pain medication as prescribed by your surgeon. Taking the medication before the pain becomes severe will help reduce the pain sooner.
- In the unlikely event that the pain medication does not work or you are experiencing unpleasant side effects, contact your orthopaedic surgeon.
- If you are taking pain medication, please **avoid alcoholic beverages.**
- If you need a refill in pain medication, you must call the Orthopaedic office at 802.775.2937 and someone will be required to pick this up. Narcotics cannot be called in to a pharmacy. Note: 24 hour notice, Monday through Friday, is required.

Discharge Instructions *(continued)*

Long Range Protection Against Infection – Antibiotic Prophylaxis

Although it is very rare, spinal implants can become infected by the bloodstream carrying bacteria from another part of the body. Therefore, it is important that every bacterial infection (*pneumonia, urinary tract infection, abscesses, etc.*) be treated promptly by your primary care provider. Routine colds and flu, as well as cuts and bruises, do not need to be treated with antibiotics.

Nutritional Program

It is very important that you eat a well-balanced diet. Your body is in the process of healing and needs proper nutrition.

Managing Constipation

Constipation may occur after surgery because of relatively little activity and the use of pain medication. To solve this problem:

- Increase your intake of water. Drink at least 8 glasses of water daily.
- Try adding fiber to your diet by eating fruits, vegetables and foods that are rich in grains.
- Take an over-the-counter stool softener or laxative.

Rehabilitation

You will have scheduled follow-up appointments with your surgeon. Your surgeon will guide you for future physical therapy and rehabilitation.

Driving

Most patients are able to resume driving about four weeks after surgery. Your ability to drive depends on your leg positioning, strength and coordination. You must be off narcotic pain medication before driving.

Follow-up Appointments

Regardless of how well you may feel after having been home for a while, it is necessary for you to attend all follow-up appointments with your surgeon.

The first appointment will be scheduled 2 weeks after surgery, then 8 weeks, 1 year and 3 years after that, for the lifetime of your prosthesis.

Specific Discharge Instructions

You will receive individualized instructions when discharged from the hospital. Your plan will be individualized and set up by the Case Manager.

Frequently Asked Questions

1. What are normal post-surgery symptoms?

Back pain.

2. How long will I be in the hospital?

On average 24 hours. You should be able to get in and out of bed independently or with minimal assistance before going home. You should be able to walk about 150 feet before going home and be able to eat without nausea. You will be required to go up and down a short set of stairs. Your pain should be controlled with oral pain medication.

3. How long will I have to wear elastic stockings?

Two weeks.

4. How long will I have to use a walker/crutches?

Use of ambulatory assistive devices is individualized, and not all patients will need to use a walker/crutches. Your physical therapist will determine that by evaluating your progress in therapy.

5. How long will I have to go through physical therapy after discharge?

Your surgeon and physical therapist will determine that by evaluating your progress in therapy. Your surgeon will tell you if physical therapy is needed. Typically this starts after 6-7 weeks.

6. When will I see the surgeon after surgery?

You will be given an appointment at time of discharge from the hospital for your first follow-up visit.

7. What is the infection rate at Rutland Regional Medical Center?

Consistently at or below the national average.

8. Can I have my hair colored or permed before my surgery?

Yes

9. When can I consider myself completely healed?

It takes about three months to heal to a point where you can resume most normal activities. Some patients recover faster than others. Health status, personal motivation and response to rehabilitation all directly affect your recovery. It often takes up to a year for full recovery.



Rutland Regional Medical Center

www.RRMC.org | 160 Allen Street, Rutland, VT | 802.775.7111

Healthy You. Healthy Together.



June 2023